REMARKS

Claims 1, 2 and 4-10 are now pending in the application. The amendments to the claims contained herein are of equivalent scope as originally filed and, thus, are not a narrowing amendment. The Examiner is respectfully requested to reconsider and withdraw the rejection(s) in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 102

Claims 1, 7 and 10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Shanks et al. (US2002/0152044). This rejection is respectfully traversed.

The data sequence communicating steps shown in the present application and Shanks have some general similarity because both of them apply three types of waveforms. However, the applicant believes that there is a substantial difference between the present application and Shanks. The present application applies three waveforms and all of them have 50% duty ratio. Therefore, it is possible to achieve 50% duty ratio even if the data sequence varies. Shanks has only one waveform which has 50% duty ratio. It is impossible to achieve 50% duty ratio by applying Shanks because the data sequence is flexible and has variations. Therefore, the present application has a different constitution and has a significant advantage which cannot be obtained by using Shanks.

If symbols of data do not have 50% duty ratio, it is not possible to achieve a certain average value (reference value) of the DC element of the received data with respect to all the data types (because DC offset is caused). By using the reference value, it is determined whether the received signal is in a high level state or a low level state. Therefore, for example, if the same signal is continuously received for a long time, a large DC offset is caused and there is a possibility in which a detection error at a detection circuit is caused when a received signal is changed.

Moreover, in order to omit the clock circuit, it is necessary to have a one-to-one relationship between one symbol and a rise (or a fall) with respect to all the waveforms. As described in the specification, in H11-355365, this problem is solved by using both a waveform which is obtained by combining a pair of the waveforms A corresponding to one

data symbol and a waveform obtained by combining the waveforms A and B corresponding to one data symbol. However, 2T is necessary for H11-355365 to transmit 1 bit. The present invention applies the third waveform and achieves (i) 50% duty ratio (omitting adjustment of DC offset), (ii) one-to-one relationship between "rise" and "symbol" (omitting the clock circuit) and (iii) transmittal 1 bit in T (transmitting two times as large a volume as the prior art).

That is, the present invention has a constitution which is not disclosed in both Shanks and H11-355365 (novelty), and it is possible to achieve significant advantages (i)-(iii) (non-obviousness). Therefore, the applicant believes that the present application should be allowed.

REJECTION UNDER 35 U.S.C. § 103

Claims 2-6 and 8-9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shanks et al. (US2002/0152044). This rejection is respectfully traversed.

As described in the previous Remarks, the applicant respectfully states that the third waveform of Shanks corresponds to "NULL". Therefore, it is clearly different from the present application. Moreover, the present application has the above-described significant advantages (i)-(iii) that cannot be obtained by Shanks.

REJECTIONS UNDER 35 U.S.C. § 112

The Examiner has raised certain objections regarding the form of the claim language, for example, that the method claims do not appear to recite steps. This has been corrected. The claims now recite steps, namely: communicating a data sequence having a first waveform...a second waveform...etc.

Corrections to claim 7 have also been made to address the "transponder" issue noted by the Examiner.

It is thus believed that all §112 issues with the claims have now been addressed.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Dated: July 20, 2007   Respectfully submitted,

                                        By _____

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